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**DOCKET NO. D-2004-001 CP-1**

**DELAWARE RIVER BASIN COMMISSION**

**Artesian Water Company, Inc.  
Groundwater Withdrawal  
Big Oak-Burtonwood System  
Town of Smyrna, Kent County, Delaware**

**PROCEEDINGS**

This docket is issued in response to an application submitted by Artesian Water Company, Inc. (AWC) and referred to the Commission, pursuant to an Administrative Agreement under Sections 2-3.4 (a) and 2-3.7 of the *Administrative Manual - Part II, Rules of Practice and Procedure*, by the Delaware Department of Natural Resources & Environmental Control (DNREC) on April 19, 2011 for an allocation of groundwater and review of a groundwater withdrawal project (Application). The project was approved by DNREC on April 19, 2011 (Permit No. 11-0001A), subject to approval by the DRBC.

The Application was reviewed for continued inclusion in the Comprehensive Plan and for approval under Section 3.8 of the *Delaware River Basin Compact*. The Kent County Planning Commission has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on March 5, 2013.

**A. DESCRIPTION**

**1. Purpose.** The purpose of this project is for approval of an existing groundwater withdrawal allocation of up to 17.28 million gallons per 30 days (mg/30 days) to supply the docket holder's Big Oak-Burtonwood public water supply system from existing Well Nos. W-1 and W-2. The project will be incorporated into the DRBC Comprehensive Plan. Future activities for the project will be regulated by DNREC in accordance with the *Administrative Agreement Between DRBC and DNREC*, Section IV.C.4, enacted on July 8, 2010.

**2. Location.** The existing wells are located in the Smyrna River Watershed in the Town of Smyrna, Kent County, Delaware. Well Nos. W-1 and W-2 are completed in the Cheswold Aquifer.

Specific location information has been withheld for security reasons.

3. **Area Served.** The project wells serve public water to the Burtonwood, Twin Meadows, and Spring Meadows residential developments located within AWC's existing service territory. The service area is outlined on a map entitled "Artesian Water Company's Service Area" submitted with the Application. For the purpose of defining Area Served, the Application is incorporated herein by reference consistent with conditions contained in the DECISION section of this docket.

4. **Physical features.**

a. **Design criteria.** The AWC system currently serves water to 497 domestic service connections in the Burtonwood, Twin Meadows, and Spring Meadows residential developments. The developments will include a combined total of 1,500 domestic service connections at full build-out. AWC records an existing average and maximum water demand of 0.061 million gallons per day (mgd) and 0.091 mgd, respectively. AWC projects the 10-year average and maximum water demand to increase to 0.45 mgd and 0.60 mgd, respectively at full build-out. The allocation of 17.28 mg/30 days should be sufficient to meet the future demands of AWC

b. **Facilities.** The existing project wells have the following characteristics:

| WELL NO.<br>AND DNREC<br>ID NO. | DEPTH | SCREEN<br>INTERVAL/<br>CASING<br>DIAMETER | PUMP<br>CAPACITY | YEAR<br>DRILLED |
|---------------------------------|-------|---|------------------|-----------------|
| W-1 (181016)                    | 130'  | 65'-110' / 8"                             | 400 gpm          | 2001            |
| W-2 (192576)                    | 145'  | 60'-110' / 10"                            | 400 gpm          | 2003            |

All water service connections are metered.

All wells are metered.

Prior to entering the distribution system, the water is treated phosphate-based corrosion inhibitor and chlorinated for disinfection. Provisions have been made for future fluoride addition.

The project wells are not located in a 100-year flood hazard area.

The water system is not presently interconnected with any other water system.

c. **Other.** Wastewater is conveyed to the Kent County sewage treatment facility most recently approved by DRBC Docket No. D-1977-087 CP-3 on July 11, 2012. The DNREC issued its most recent NPDES Permit No. DE0020338 on November 1, 2006 for this treatment facility. The treatment facility has adequate capacity to receive wastewater from the proposed project.

d. **Cost.** The overall cost of this project was \$250,000.

e. **Relationship to the Comprehensive Plan.** The project will be incorporated into the Comprehensive Plan. Future activities for the project will be regulated by DNREC in accordance with the *Administrative Agreement Between DRBC and DNREC*, Section IV.C.4, enacted on July 8, 2010.

## **B. FINDINGS**

The project is designed to conform to the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

The DNREC water allocation is valid for a period of 30 years from date of issue, with review every five years.

This project consists of an existing withdrawal of groundwater from Well Nos. W-1 and/or W-2. The docket holder has requested allocations for the existing wells based on existing and projected water use. These allocations are provided in Condition C.II.d. in the Decision Section of this docket. Pumping tests performed on both wells indicate that there should be no adverse impacts to the local hydrologic system from withdrawals from Well Nos. W-1 and W-2.

### **Water Audits for Public Water Supply Systems Serving Greater than 100,000 gpd**

Section 2.1.8 of the Water Code states that it is the policy of the Commission to establish a standardized water audit methodology for owners of water supply systems serving the public to ensure accountability in the management of water resources. Voluntary Water Audits were encouraged for public water supply systems through December 31, 2011 (Section 2.1.8.B.). Effective January 1, 2012, the owners of each public water supply system are required to implement an annual calendar year water audit program conforming to IWA/AWWA Water Audit Methodology (AWWA Water Loss Control Committee (WLCC) Water Audit Software) and corresponding AWWA guidance (Section 2.1.8.C). Water audits shall be submitted annually to the Commission by March 31 every year.

The DRBC estimates that the project withdrawals, used for the purpose of public water supply, result in a consumptive use of 10 percent of the total water use. The DRBC definition of consumptive use is defined in Article 5.5.1.D of the *Administrative Manual – Part III – Basin Regulations – Water Supply Charges*.

### **Administrative Agreement**

This project is classified as a First Time Comprehensive Plan Project or a Category A Project according the Administrative Agreement Between the DRBC and DNREC (AA) Section IV.C.1., enacted on July 8, 2010. The project will be incorporated into the DRBC Comprehensive Plan. Future activities for the project will be regulated by DNREC in accordance with the AA, Section IV.C.4. Applications for modifications or renewals of permits associated with this approval shall be submitted to DNREC. The Commission conducts no review unless review and/or docket action or technical assistance is requested by the DRBC Commissioner from the State of Delaware as described in Condition C.II.r. in the Decision Section of this docket.

The project does not conflict with the Comprehensive Plan and is designed to prevent substantial adverse impact on the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

### **C. DECISION**

I. Effective on the approval date for Docket No. D-2004-001 CP-1 below, the project and the appurtenant facilities described in the Section A “Physical features” shall be added to the Comprehensive Plan.

II. The project and appurtenant facilities as described in the Section A “Physical features” are approved pursuant to Section 3.8 of the *Compact*, subject to the following conditions:

a. Docket approval is subject to all conditions, requirements, and limitations imposed by DNREC in its Public Water Allocation permit, and such conditions, requirements, and limitations are incorporated herein, unless they are less stringent than the Commission’s.

b. The wells and operational records shall be available at all times for inspection by the DRBC.

c. The wells shall be operated at all times to comply with the requirements of the *Water Code* and *Water Quality Regulations* of the DRBC.

d. During any 30-day period, the combined withdrawal from all well sources shall not exceed 17.28 million gallons. No well shall be pumped above the maximum instantaneous rate and 30-day allocation as indicated below:

| <b>WELL NO.</b> | <b>MAXIMUM<br/>INSTANTANEOUS<br/>RATE</b> | <b>30-DAY<br/>ALLOCATION</b> |
|-----------------|---|------------------------------|
| W-1             | 400 gpm                                   | 17.28 mg                     |
| W-2             | 400 gpm                                   | 17.28 mg                     |

e. The wells shall be equipped with readily accessible capped ports and minimum ½ inch inner diameter (ID) drop pipes so that water levels may be measured under all conditions.

f. The project withdrawals shall be metered with an automatic continuous recording device that measures to within 5 percent of actual flow. An exception to the 5 percent performance standard, but no greater than 10 percent, may be granted if maintenance of the 5 percent performance is not technically feasible or economically practicable. A record of daily withdrawals shall be maintained, and monthly totals shall be reported to the DNREC annually and shall be available at any time to the Commission if requested by the Executive Director.

g. Each new water service connection shall include a water meter in accordance with the DRBC's Resolution No. 87-7 (Revised).

h. In accordance with DRBC Resolutions No. 87-6 (Revised) and No. 2009-1, the docket holder shall continue to implement to the satisfaction of the DNREC, the systematic program to monitor and control leakage within the water supply system. The program shall at a minimum include: periodic surveys to monitor leakage, enumerate non-revenue water and determine the current status of system infrastructure; recommendations to monitor and control leakage; and a schedule for the implementation of such recommendations. The docket holder shall proceed expeditiously to correct leakages and unnecessary usage identified by the program.

i. In accordance with DRBC Resolution No. 2009-1 and Section 2.1.8 of the Water Code, the docket holder shall implement an annual calendar year water audit program conforming to IWA/AWWA Water Audit Methodology (AWWA Water Loss Control Committee (WLCC) Water Audit Software) and corresponding guidance. Water audits shall be submitted annually to the Commission by March 31 every year.

j. The docket holder shall implement to the satisfaction of the DNREC, the continuous program to encourage water conservation in all types of use within the facilities served by this docket approval. The docket holder will report to the DNREC on the actions taken pursuant to this program and the impact of those actions as requested by the DNREC.

k. No water service connections shall be made to newly constructed premises with plumbing fixtures and fittings that do not comply with water conservation performance standards contained in Resolution No. 88-2 (Revision 2).

l. The docket holder shall continue to implement its Water Conservation Plan as approved by DNREC, and shall report to the DNREC on actions taken pursuant to this program and the impact of those actions as requested by the DNREC.

m. The docket holder shall implement to the satisfaction of the DNREC, a drought or other water supply emergency plan.

n. Sound practices of excavation, backfill and reseeding shall be followed to minimize erosion and deposition of sediment in streams from any new facilities or repair related construction.

o. No new water service connections shall be made to premises connected to sewerage systems which are not in compliance with all applicable effluent limits contained in State permits and the *Water Quality Regulations* of the Commission.

p. Nothing herein shall be construed to exempt the docket holder from obtaining all necessary permits and/or approvals from other State, Federal or local government agencies having jurisdiction over this project.

q. The docket holder is permitted to provide the water approved in this docket to the areas included in Section A.3. Area Served of this docket. Any expansion beyond those included in Section A.3. Area Served is subject to DRBC review and approval in accordance with Section 3.8 of the *Compact*.

r. Applications for modifications or renewals of permits associated with this approval shall be submitted to DNREC. The Commission conducts no review unless review and/or docket action or technical assistance is requested by the DRBC Commissioner from the State of Delaware in accordance with the AA, Section IV.C.4.

s. The issuance of this docket approval shall not create any private or proprietary rights in the water of the Basin, and the Commission reserves the rights to amend, alter or rescind any actions taken hereunder in order to insure the proper control, use and management of the water resources of the Basin.

t. If the monitoring required herein, or any other data or information demonstrates that the operation of this project significantly affects or interferes with any domestic or other existing uses of ground or surface water, or if the docket holder receives a complaint by any existing ground or surface water users within the zone of influence of the withdrawal, the docket holder shall immediately notify the Executive Director of any complaints by any ground or surface users within the zone of influence of the withdrawal, and unless excused by the Executive Director, shall investigate such complaints. The docket holder should direct phone call notifications of potential well or surface water interference or complaints of interference to the DRBC Project Review Section at 609-883-9500, extension 216. Oral notification must always be followed up in writing directed to the Executive Director. In addition, the docket holder shall provide written notification to all potentially impacted users of wells or surface water supplies of the docket holder's responsibilities under this condition. Any ground or surface water user which is substantially adversely affected, rendered dry or otherwise diminished as a result of the docket holder's project withdrawal, shall be repaired, replaced or otherwise mitigated at the expense of the docket holder. A report of investigation and/or mitigation plan prepared by a hydrologist shall be submitted to the Executive Director as soon as practicable. The Executive Director shall make the final determination regarding the validity of such complaints, the scope or sufficiency of such investigations, and the extent of appropriate mitigation measures, if required.

u. The Executive Director may modify or suspend this approval or any condition thereof, or require mitigating measures pending additional review, if in the Executive Director's judgment such modification or suspension is required to protect the water resources of the Basin.

v. For the duration of any drought emergency declared by either Delaware or the Commission, water service or use by the docket holder pursuant to this approval shall be subject to the prohibition of those nonessential uses specified by the Governor of Delaware, to the extent that they may be applicable, and to any other emergency resolutions or orders adopted hereafter by the Commission.

w. Any person who objects to a docket decision by the Commission may request a hearing in accordance with Article 6 of the *Rules of Practice and Procedure*. In accordance with Section 15.1(p) of the Delaware River Basin Compact, cases and controversies arising under the Compact are reviewable in the United States district courts.

**BY THE COMMISSION**

**APPROVAL DATE:**

**EXPIRATION DATE: March 6, 2023**